

Application No.: 10/717,887

**REMARKS**

The Office Action of April 6, 2005 has been carefully considered. Reconsideration of this application, as amended, is respectfully requested.

Applicants wish to direct the Examiner's attention to aspects of the present invention that, as indicated in the as-filed application (e.g., p. 2, lines 12 – 23), incorporate "improved packaging and design, along with specific circuits that are essential to optimize the benefits of an integrated and encapsulated power converter, whereby all components are contained within a common enclosure." In addition to incorporating the power supplying components within a common enclosure, it is desirable to encapsulate the entire power supply to provide environmental protection and immunity to dirt, moisture and vibration. Moreover, such a "package" permits the use of simplified, self-contained power converters in electronic devices. The claims, as presented herein, are believed to set forth particular aspects of such power converters.

The specification has been amended to move the claim for priority to the first paragraph.

Claims 1 and 14 are amended to correct an informality noted in each claim. Claim 8 has been amended to correct an informality and to indicate that the current limiting circuit is encapsulated with the power converter. Although such a limitation is set forth in the preamble, Applicants have nonetheless added the requirement to the claim elements so as to assure appropriate consideration as a limitation.

Turning now, to the office action, claims 8 – 14 were rejected under 35 USC §102(e) as being anticipated by Wong et al. (6,775,164). Claims 1 – 7 and 14 – 21 were rejected under 35 USC §103(a) as being unpatentable over Squibb (5,499,184) in combination with Keith (5,395,264).

Considering first, the rejection based upon Wong, Applicants respectfully traverse the rejection as failing to teach all of the limitations recited in claim 8, as well as the limitations of dependent claims 9 – 14. Wong discloses a pulse width modulation (PWM) controller integrated circuit suitable for use in a switching power supply among other devices. Although Wong does teach several similar components, the specific limitations and relationships of the components is not disclosed by Wong. In particular, Applicants contend that there is no teaching in Wong of the encapsulation

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of the switching power supply as is now expressly recited in claim 8. Nor is there a disclosure that the MOSFET is connected to the DC return path of the bridge rectifier. Wong also fails to teach or suggest a voltage level detection circuit to maintain the MOSFET switch in an off state until a line voltage reaches a near zero threshold. Applicants note that the Examiner bases the rejection on a recited photodetector (64) – which appears to be erroneously cited in the rejection as both a photodetector and a detection circuit.

The resistive charging path, specifically recited as turning the MOSFET switch to an on state once the line voltage reaches the near zero threshold, has been alleged to be taught by a "bias pin 47" that enables bias power to be applied to the Wong integrated circuit (col. 4, lines 1 – 5). Applicants respectfully contend that such a teaching does not give rise to the claimed limitation. Lastly, claim 8 further recites "a resistive connection to a housekeeping supply of the power converter which maintains the MOSFET switch in the on state." The rejection alleges that such a limitation is taught by the AC connections of Wong. However, a careful review of the instant application reveals the recited housekeeping supply (depicted in FIGS. 4A and 4B) is in addition to the AC inputs. In view of the various limitations not taught by Wong, Applicants respectfully urge that claim 8, and all claims dependent therefrom, are not anticipated under 35 USC §102(e) by Wong et al., and claims 8 - 14 are therefore in condition for allowance.

Considering now the traversal of the rejection under 35 USC §103(a), the disclosures of the cited art and the distinctions between claims 1 – 7 and 14 - 21 may be briefly summarized as follows:

Squibb is directed to a power switching circuit for remotely activating a power supply, where the power switch is electrically isolated from the primary of the power supply, and teaches how to use an auxiliary oscillator to provide a low voltage isolated remote on/off control. To the best of Applicants knowledge, in addition to failing to teach a detachable line cord (not being a power converter, but a remote control aspect of a power supply), Squibb also fails to teach the use of an encapsulant for high-voltage electronic circuitry in a power converter (claim 1) or employing such a converter in an electronic device (claim 14).

With respect to the various limitations of the rejected dependent claims, Applicants respectfully urge that resistor 58 of Squibb, cited in the rejection, cannot give rise to

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the recited inrush current limiting circuit. Applicants note the function of the inrush circuit embodiments depicted in FIGS. 4A and 4B, and the general description where "the inrush current controller 112, holds back on the input voltage from line 102 until such a time when the incoming AC voltage is near zero. At that time, circuit 112, connects capacitor(s) 130 to the bridge rectifier, allowing capacitor(s) 130 to charge with the rising sinusoidal voltage waveform." (p. 6, line 28 – p. 7, line 4 – 8). No such teaching is believed to be found in Squibb.

Similarly, relative to the various dependent claims, while related components are recited, Squibb fails to teach or suggest the specific limitations set forth in the dependent claims. For example, although an opto-coupler is disclosed, there does not appear to be any characterization of its use to "to disable the power supply output in response to the signal received by the photo-detector," as recited in claims 3 or 18. With reference to claims 6 and 21, these claims recite a "secondary side, isolated low voltage ON/OFF function" implemented by circuitry including a peak detector for sensing the instantaneous primary rectified voltage connected to a linear regulator / voltage limiting circuit, connected to a light emitter of an opto-coupler, said opto-coupler being further connected to an error amplifier and an ON/OFF pin in such a manner as to provide a isolated secondary low voltage indication of the primary line voltage and to allow the user to turn the device off." Here again, no such teaching of the interrelationship between components is believed to be taught or suggested in Squibb.

Moreover, the rejection fails to set forth specific reference to other aspects of Squibb that are relied upon to disclose or suggest limitations found in the present claims. In the event the rejection is maintained, Applicants respectfully request that particular teachings be set forth for each claim limitation and not just for general components found in circuits. For example, claims 2 and 17 recite a "MOSFET switch connected to the DC return path of the bridge rectifier" (emphasis added). Although a MOSFET may be taught, no such use or limitation has been disclosed in Squibb.

In view of the above-noted claim limitations (independent and dependent), Applicants respectfully submit that the teachings of Squibb fall far short of teaching the claim elements recited, and that *prima facie* obviousness has not been established to which Applicants can or should further respond.

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Keith, cited for teaching an integrated connector in a power controller, actually teaches the use of a standard AC extension cord to pass audio signals. Not only does Keith fail to teach or suggest a power controller having an integrated connector (claims 1 and 14), but also fails to suggest "connection to an AC utility line source that is independent of the circuit board to which the power converter is attached" (claim 15). Accordingly, the recited limitations relative to an integrated connector do not appear in any way to suggest the recited limitations. In fact, the teachings of Keith relate to use of AC extension cords as audio cables, which is entirely contrary to the present invention – as a source of power for a power converter. Thus, Keith also clearly teaches away from the proposed modification.

With respect to the proposed combination of Squibb and Keith, there is simply no basis for urging one of ordinary skill in the art would have been motivated to make such a combination. The only commonality between Squibb and Keith is that the term AC is used by Keith - Keith clearly teaches an alternative, and incompatible, use of AC cords for audio signal transmission. Given that the combination would render either invention wholly inoperable, there is no basis for the proposed combination – other than Applicants claims, which appear to have been employed as a "recipe" for hindsight reconstruction of the invention.

In view of the above-noted distinctions, as well as the lack of a teaching or suggestion by which Squibb and Keith are taught or suggested for combination, Applicants respectfully urge that claims 1 and 14 are presently in condition for allowance, the rejection having been traversed. Insofar as claims 2 – 6 and 15 - 21 are concerned, these claims all depend from now presumably allowable amended claims 1 or 14 and are also believed to be in allowable condition for the reasons hereinbefore discussed with regard to such claims.

In view of the foregoing remarks and amendments, reconsideration of this application and allowance thereof are earnestly solicited. In the event that additional fees are required as a result of this response, including fees for extensions of time, such fees should be charged to USPTO Deposit Account No. 50-2737 for Basch & Nickerson LLP.

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In the event the Examiner considers personal contact advantageous to the timely disposition of this case, he is hereby authorized to call Applicant's attorney, Duane C. Basch, at Telephone Number (585) 899-3970, Penfield, New York.

Respectfully submitted,



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